RP

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

June 12, 1987
RP:0075

District Engineer (PODCO-O)
U.S. Army Corps of Engineers
Building 230
Fort Shafter, HI 96858

Dear Sir:

Corps of Engineers Permit Application
PODCO-O 1995-SD
Saipan Marina
Garapan, Saipan, CNMI

We have conducted a review of the above noted document with the assistance of Robert Grace, Civil Engineering; Paul Jokiel, Hawaii Institute of Marine Biology; and Jon Matsuoka, Social Work. Principal activities proposed for this location include dredging a harbor basin and an entrance channel; construction of breakwaters, revetments, bulkheads, piers, and other facilities for a marina; filling along 1700 feet of shoreline to create 5 acres of new land; and installation of intake and discharge lines for an aquarium and a salt water swimming pool to be included as part of a major resort development.

Our reviewers generally find the detail of documentation accompanying the application insufficient to allow reasonable evaluation of the potential impacts of a project of this magnitude. Particular concern has been voiced over the safety aspects of undertaking such a development in an area susceptible to typhoon and tsunami hazards. In addition, the following comments are offered pertinent to specific issues related to the proposed activities.

Engineering:

1. Evaluation of engineering aspects of the project was made difficult by the omission of critical dimensions, and by the fact that drawings were not to scale.

2. Embankment slopes of 45° seem excessively steep, although dimensions not included in the drawings may mitigate this concern.

3. No reinforcing structures are shown in either the concrete circulation culvert or the concrete breakwater.

4. The surge frequency in the harbor is not specified. This is a critical parameter which must be incorporated into the basic design.

5. Calculations must be made to determine the stability of the proposed embankments.

Biological Impacts:

In the absence of site-specific biological information, precise assessment of biological impacts cannot be made. The following general concerns are raised:

1. sediments and sessile fauna of small boat harbors in the tropics have been found to contain elevated levels of heavy metal toxins leached from anti-fouling coatings on resident boats;

2. such extensive dredging in coral reef areas has been implicated in outbreaks of ciguatera poisoning; and

3. if the salt water pool is chlorinated either at a constant low level or periodically at high levels for cleaning purposes, discharge of pool waters will be toxic to the surrounding reef areas.

Social Impacts:

Generally, actual physical displacement of artisanal fishermen does not in itself constitute a major problem. The examples of other developed areas in the Pacific suggest that pollution-related impacts of major coastal modifications due to development cause most declines in fisheries and attendant losses of the fishermen's reliance on the ocean for support. A broader concern is the cultural deterioration which accompanies development, particularly the loss of native skills and the diminishment of ties to the land. Since the land constitutes a major element of the islanders' identity, these losses undermine culture and lifestyle. Frequently, behavioral changes attendant to lifestyle alteration induce negative attributes such as substance abuse and the proliferation of welfare dependence.

We appreciate the opportunity to provide comments on this public notice.

Sincerely,

John T. Harrison
Environmental Coordinator

cc: OEQC
L. Stephen Lau
Robert Grace
Paul Jokiel
Jon Matsuoka
Pamela Bahnsen